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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WOO, ISAAC M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 12/17/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,907

Applicant(s)

THOMPSON ET AL.

Examiner

Isaac M Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to Applicant's Amendments, filed on September 22, 2003 have been considered but are deemed moot in view of new ground of rejections below for claims 21-24.
2. The applicant canceled claims 1-20. And the pending claims are 21-30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sebastian et al (U.S. Patent No. 5,293, 479, hereinafter, "Sebastian") in view of Humpleman et al (U.S. Patent No. 5,546,419, hereinafter, "Humpleman").

With respect to claim 21, Sebastian discloses, the method of configuring a product, representing product knowledge in a hierarchical structure, (col. 19, lines 30-47) wherein the representing step includes storing product category information in frames in

the form of nodes of the hierarchical structure (col. 7, lines 11-27) and storing product features (col. 5, lines 11-21, col. 7, lines 11-27, col. 19, lines 30-47) and options (col. 25, lines 41-60) in slots for respective nodes of the structure, see (col. 7, lines 11-28); outputting a set of product-specific questions, see (col. 17, lines 4-21); receiving individual answers to respective ones of the set of product-specific questions, see (col. 17, lines 4-21); performing frame-based inferences of the product knowledge stored in the hierarchical structure based on answers received, see (col. 8, lines 54-67 to col. 9, lines 1-48); configuring a product with features and options based on inferences made, see (col. 19, lines 17-46). Sebastian discloses at least one product-specific question, see (col. 17, lines 4-21). Sebastain does not explicitly disclose removing from the question output set, prior to receiving an answer the question. This limitation is about the control of the user interface that allows network communication. Humpleman discloses, "Each client device can include a user communication interface including input devices such as a mouse and keyboard for receiving user input, and a display for a providing a control use user interface for a use to interact with the network devices. The user interface can include a graphical user interface (GUI) display for providing information to the user", see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-4). This teaches the control of the user interface to receive user input and system output. Therefore, it would have been obvious to a person having ordinary skill in the of the time invention was made to include removing from the question output set, prior to receiving an answer the question in the system of Sebastian to provide user interface for user

inputting. Because many differently designed GUI provides user convenient user interface to communicate the system and users.

With respect to claim 22, Sebastain discloses, the representing the hierarchical structure in the form of a tree, wherein frames of the tree maintain parent-child relationships in which a child frame inherits all of the features and options of a parent frame, see (col. 7, lines 11-27, col. 5, lines 11-21, col. 7, lines 11-27, col. 19, lines 30-47).

With respect to claim 23, Sebastain discloses, the filtering inferences made in the performing step by executing a set of rules on the inferences made so as to produce a product configuration, wherein the product configuration is in the form of a window product, see ((col. 7, lines 11-27, col. 5, lines 11-21, col. 7, lines 11-27, col. 19, lines 30-47).

With respect to claim 24, Sebastain discloses, the removing a given product-specific question in response to invalidation of a slot in a frame corresponding to the given product-specific question, see (col. 7, lines 11-27, col. 5, lines 11-21, col. 7, lines 11-27, col. 19, lines 30-47).

5. Claims 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al (U. S. Patent No. 5,784,286, hereinafter, "Hirose") in view of Sebastian et al (U.S. Patent No. 5,293, 479, hereinafter, "Sebastian").

With respect to claim 25, Hirose discloses, machine-readable recording medium for use in configuring a product assembly (col. 5, lines 2-34), the recording medium having stored therein a series of machine executable program instructions executed by a machine to perform, requesting a product type; prompting a set of product-specific questions selected based on product type requested; providing answers to product-specific questions as prompted, see (Question and Answer, C8, C9, FIG. 14, C4, C5, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10); configuring the assembly product knowledge base in response to answers provided, see (M15(d12), FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63); displaying line drawings of the assembly as configured, wherein the line drawing graphically depicts a type, size and style of the assembly as configured, see (M15(d12), FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63), the assembly as configured and displayed, see (M15(d12), FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63). Hirose discloses the assembly as configured and displayed (M15(d12), FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63). Hirose does not disclose frame-based inference and the quoting a price for the assembly. However, Seabstain discloses inference engine is frame based, see (co. 19, lines 17-47). Sebastain discloses the component price for assembly, see (col. 12, lines 47-67 to col. 13, lines 1-10). Therefore, it would have been obvious to a person having ordinary skill in the art the time of the invention was made to include frame-based inference and the quoting a price for the assembly in the system of Hirose to provide inference engine and

component price. Because the price of component for assembly can provide a user option to apply different price of component to put on design of product and inference engine that is expert system, provides modeling simulation and suggestion of knowledge of design.

With respect to claim 26, Hirose discloses, displaying composite units of the assembly as configured; allowing custom configuration of the assembly as configured by allowing addition and modification of composite units to the assembly as configured displayed, see (M15(d12), FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63).

With respect to claim 27, Hirose discloses, building a product knowledge base by storing product information related to window and door products in a hierarchical tree, wherein the hierarchical tree is composed of frames corresponding to different products and slots within each frame corresponding to attributes of the different products, see (FIG. 2, FIG. 7-8, col. 8, lines 54-67 to col. 9, lines 1-18).

With respect to claim 28, Hirose discloses, the product configuration system for configuring products based on user interaction, user interface, wherein the user interface receives answers from the user corresponding to questions output to the user in the form of a display of graphical and textual representations, see (FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63); graphics formatting and

output subsystem, wherein the graphics formatting and output subsystem performs calculations and preparations (col. 5, lines 21-34) for the display of graphical and textual representations to the user interface, see (FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63, col. 3, lines 1-64); data storage subsystem, wherein the data storage subsystem is a repository of product information representing knowledge of products including type, style and size, see (FIG. 2, FIG. 7-8, col. 8, lines 54-67 to col. 9, lines 1-18); configurator subsystem, wherein the configurator subsystem builds product configurations based on data from the data storage subsystem (FIG. 7) and established data relationships (FIG. 2, FIG. 3, col. 5, lines 61-67 to col. 6, lines 1-55), wherein the configurator includes a core module for facilitating input and output data in the system, and a frame engine for computing available configuration answers for any configuration questions posed to the user at any time (FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63), receiving values of answers received by the user interface and performing the values of answers to other questions automatically, and generating configuration data representing configuration of a desired product, see (FIG. 14, FIG. 15, col. 12, lines 19-67 to col. 13, lines 1-10, col. 8, lines 54-63). Hirose discloses the data analysis subsystem, wherein the data analysis subsystem accesses and processes data from the data storage subsystem, see (col. 1, lines 10-26). Hirose does not explicitly disclose the frame-based expert system and frame-based inferences, and price engine to generate pricing for the desired product. However, Sebastain discloses expert inference engine frame-based, see (col. 19, lines 17-47). And Sebastain discloses the component price for product assembly, see (col. 12, lines 47-67

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to col. 13, lines 1-10). Therefore, it would have been obvious to a person having ordinary skill in the art the time of the invention was made to include the performing frame-based inferences of the product knowledge and price engine to generate pricing for the desired product in the system of Hirose to get idea how to process the design. Because the rule-based inference engine (expert system, provides modeling simulation and suggestion of knowledge of design) can guide the user to design the products based on application rules and the price of component for assembly can provide a user option to apply different price of component to put on design of product.

With respect to claim 29, Hirose discloses the schematic configurator that displays on the user interface drawings representing the desired product as configured by the configurator subsystem, and allows manipulation and graphical editing of the desired product configuration, wherein the desired product configured is a door assembly, see (FIG. 6A-B, col. 8, lines 17-54).

With respect to claim 30, Hirose discloses the product code engine for both generating and receiving as inputs codes associated with component parts included in the product information stored in data storage subsystem (FIG. 7-8, database, col. 54-67 to col. 9, lines 1-62), wherein the product code engine facilitates input to and output of the system utilizing such code, see (FIG. 4, col. 6, lines 54-67 to col. 7, lines 1-18).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (703) 305-0081. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

IMW
December 10, 2003


KIM VU
SUPERVISORY PATENT EXAMINER
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